

Notice of Allowability

Application No.

10/712,666

Applicant(s)

JACKSON, THOMAS N.

Examiner

Hoang V Nguyen

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 13 November 2003.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☒ The drawings filed on 13 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/13/04 & 6/17/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



**HOANG V. NGUYEN
PRIMARY EXAMINER**

Allowable Subject Matter

1. Claims 1-30 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, Pollen et al (US 5,864,322) discloses an antenna comprising a first plurality of electrodes; a second plurality of electrodes; and a plurality of antenna pixels. Pollen, however, fails to further teach that each antenna pixel including an electrically tunable element and a control circuit, the control circuit being in electrical communication with a first electrode, a second electrode, and the tunable element, the first electrode being one of the first plurality of electrodes, and the second electrode being one of the second plurality of electrodes, such that a tunable property of the tunable element is set to a predetermined value by a tuning electrical signal provided by the first electrode when a selection signal is provided to the control circuit by the second electrode.

Claims 2-10 are allowed for depending on claim 1.

Regarding claim 11, Pollen discloses an antenna comprising a first plurality of electrodes; a second plurality of electrodes; and a plurality of antenna pixels. Pollen, however, fails to further teach that each antenna pixel including an electrically tunable element, and a control circuit in electrical communication with a first electrode the first plurality of electrodes and with a second electrode from the second plurality of electrodes, the control circuit being operable to set an electrical property of the electrically tunable element to a value determined by a tuning electrical signal provided by the first electrode when a selection signal is provided by the second electrode.

Claims 12-16 are allowed for depending on claim 11.

Regarding claim 17, Pollen discloses an antenna comprising a first plurality of electrodes; a second plurality of electrodes; and a plurality of antenna pixels. Pollen, however, fails to further teach that each antenna pixel having an electrical tunable element; a radiative element; and an electronic switch providing electrical communication between a first switch terminal and a second switch terminal when a selection signal is received by the electronic switch, the first switch terminal being electrically connected to a first electrode, the second switch terminal being electrically connected to the electrically tunable element, the selection signal being provided by the second electrode, such that the electrically tunable element is electrically controlled by a tuning electrical signal provided through the first electrode when the selection signal is provided to the electronic switch through the second electrode.

Claims 18-30 are allowed for depending on claim 17.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent 6,567,046 discloses a reconfigurable antenna.

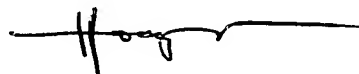
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn
1/12/05



**HOANG V. NGUYEN
PRIMARY EXAMINER**